

BEST PRACTICE
BOOKLET
**in installing
sensors**



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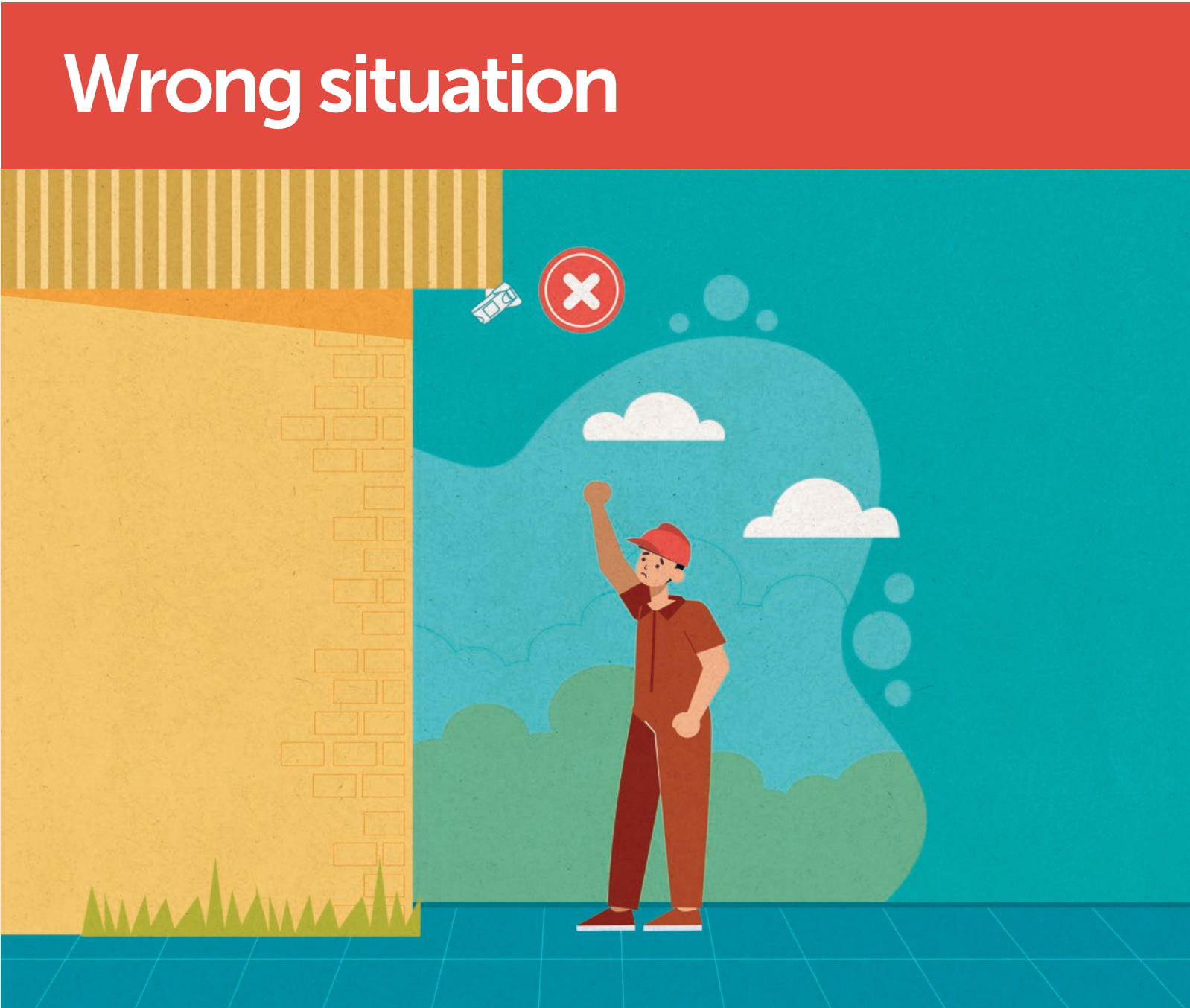
Introduction

Before reaching the market, all Intelbras products undergo rigorous quality and safety tests. However, just as important as how our solutions are made is how they are installed. Therefore, to ensure the maximum performance of our sensors, we have created this Best Practices Booklet. The objective is to facilitate your installation service with information and guidelines on how to act in each situation.

PLEASE READ CAREFULLY, ENJOY THE CONTENT AND, IF YOU HAVE ANY QUESTIONS, TALK TO OUR AFTER-SALES THAT IS ALWAYS AVAILABLE TO HELP.



Motion sensor



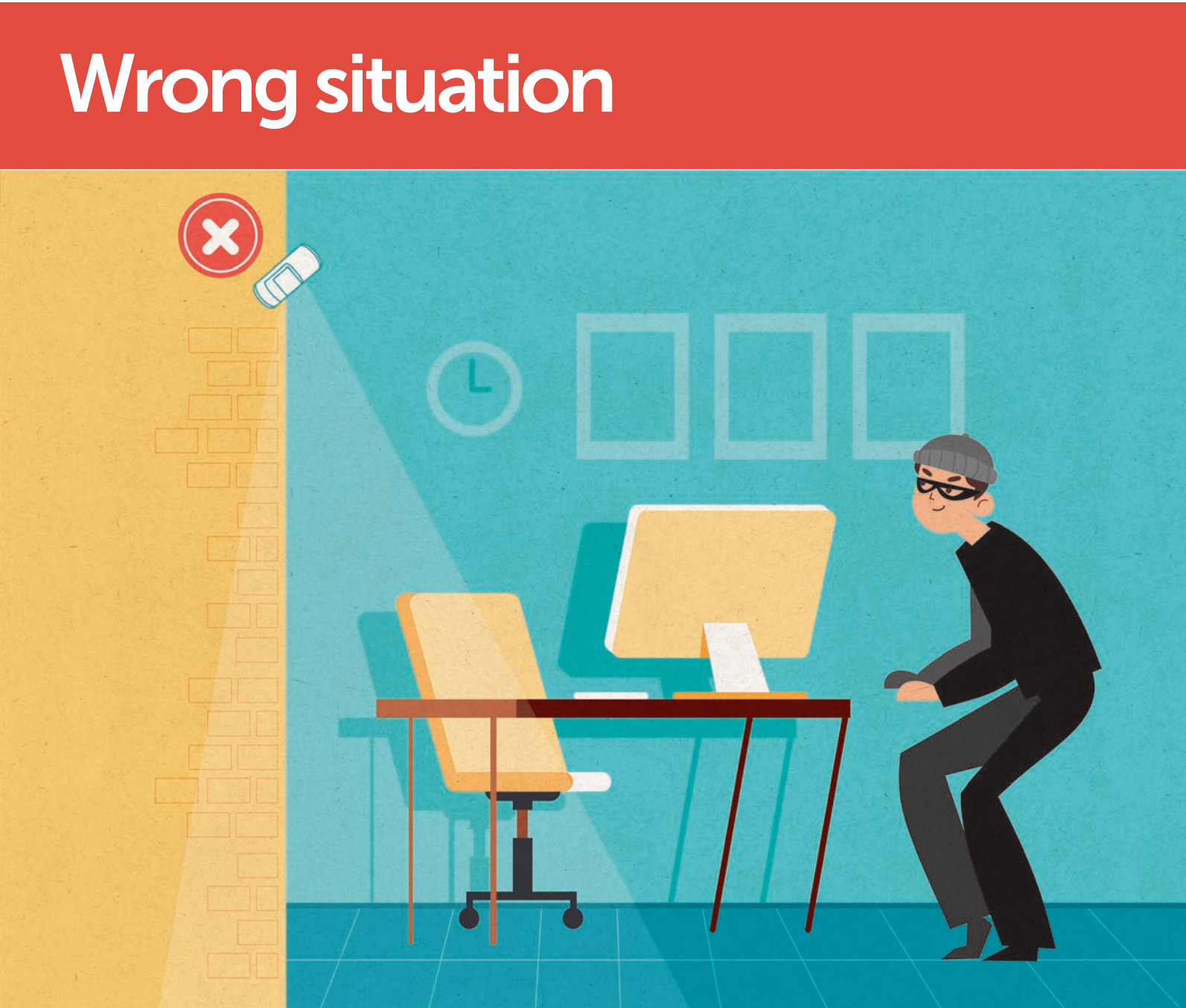
ERROR:
Sensor positioned at incorrect height.

OCCURRENCE:
1st Limited detection range (very low sensor).
2nd Blind spot under the sensor (very high sensor).



SOLUTION:
Install the sensor as recommended in the product manual.

REASON:
Motion sensors have a limited detection area. When installing outside the specified height, the detection area will change, which may create blind spots.



Wrong situation

ERROR:
Sensor extremely tilted down due to articulator fragility.

OCCURRENCE:
Limited detection range.



Right situation

SOLUTION:
Install the sensor directly on the wall and, when necessary, use robust articulators.

REASON:
When tilted down, the sensor does not see its furthest detection point, thus losing its efficiency and focusing only on nearby points.

Wrong situation



ERROR:

Motion sensor installed in front of air displacement.

OCCURRENCE:

Accidental sensor alarm caused by air temperature variation.

Right situation

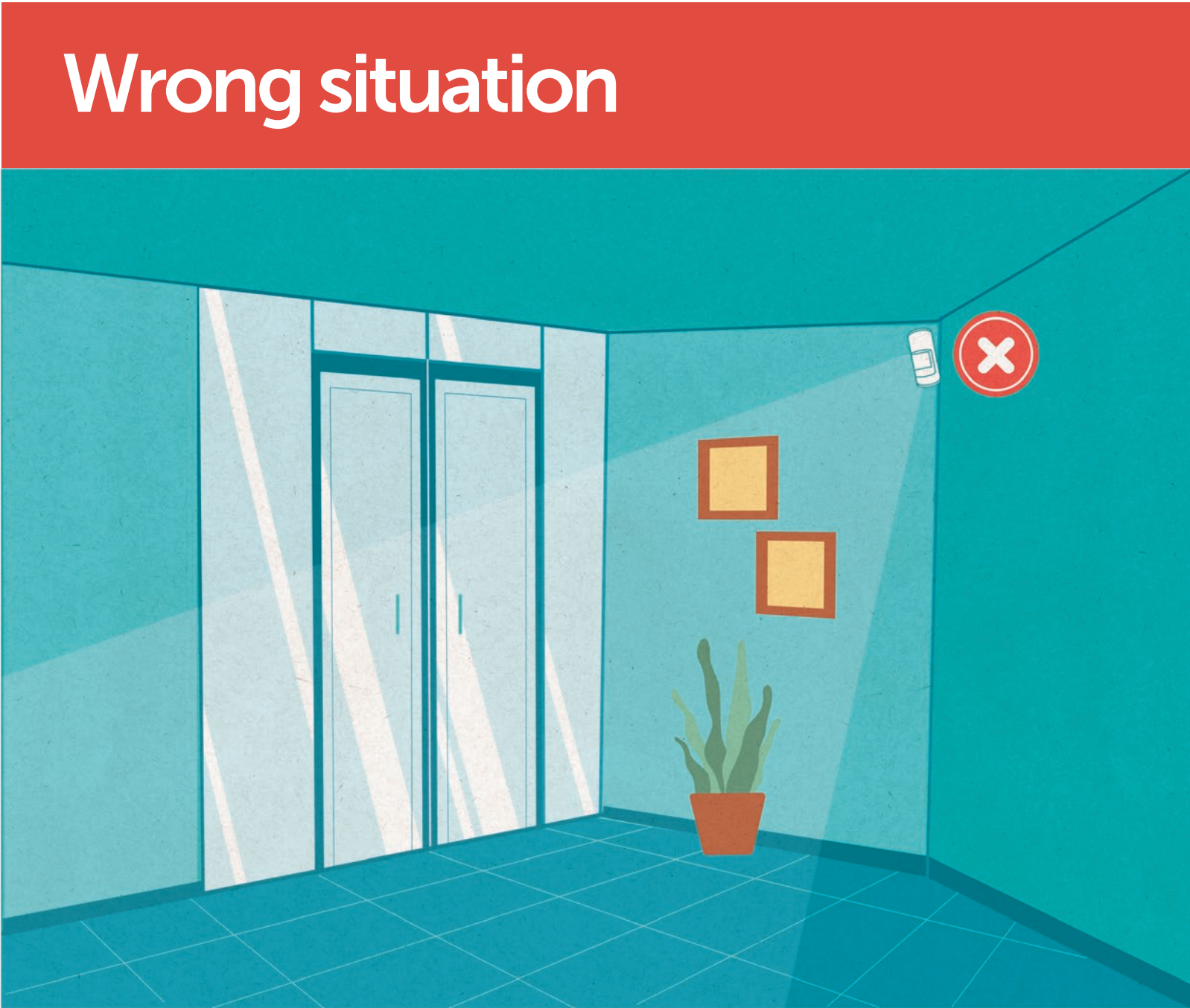


SOLUTION:

Install the sensor on the same wall where air displacement occurs or in another location where the air current does not interfere with detection.

REASON:

Infrared sensors monitor heat variation. The displacement of air in certain openings can abruptly change the temperature in the sensor's detection area, thus resulting in sensor trigger.



ERROR:
Install the microwave sensor in front of glass doors or shop windows.

OCCURRENCE:
Accidental sensor alarm generated by movements from the outside of the environment.



SOLUTION:
Install the microwave sensor on the same wall as the window or glass door.

REASON:
Microwave sensors have high frontal mass displacement sensitivity, capable of detecting beyond walls/glass. However, behind the sensor, the detection area is smaller.



ERROR:
Infrared sensor installed in front of cameras.

OCCURRENCE:
Accidental sensor alarm generated by the camera's infrared activated in night mode.



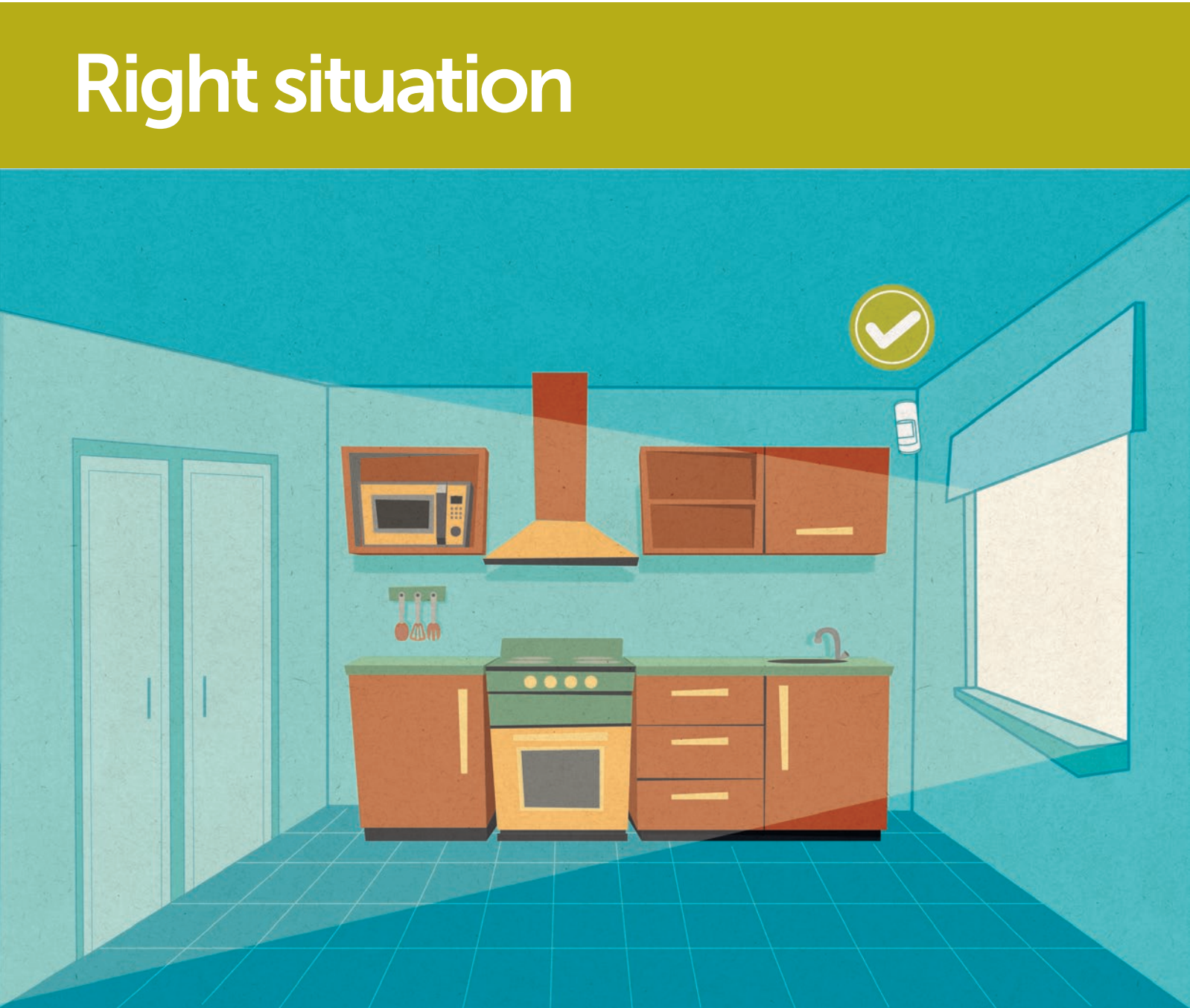
SOLUTION:
Install the sensor and camera on the same wall plane.

REASON:
Infrared sensors are susceptible to other IR generating sources, thus generating accidental triggers.



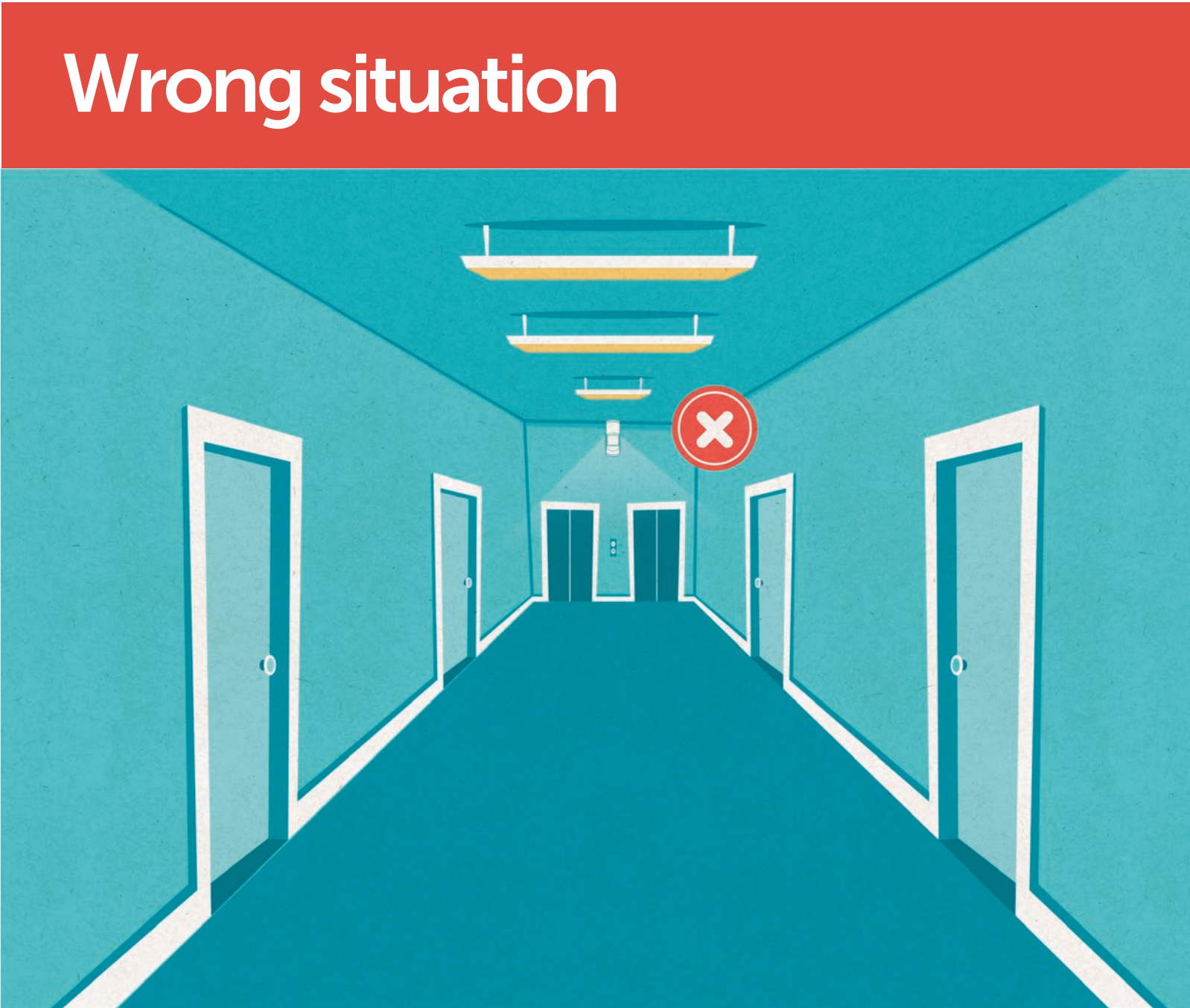
ERROR:
Infrared sensor installed in front of sunlight reflection.

OCCURRENCE:
Accidental sensor alarm generated by the reflection of sunlight directly on the sensor.



SOLUTION:
Install the sensor at a point without the incidence of sunlight reflections, or change the sensor to a model with microwave.

REASON:
Infrared sensors are susceptible to sunlight reflections, generating accidental triggers.



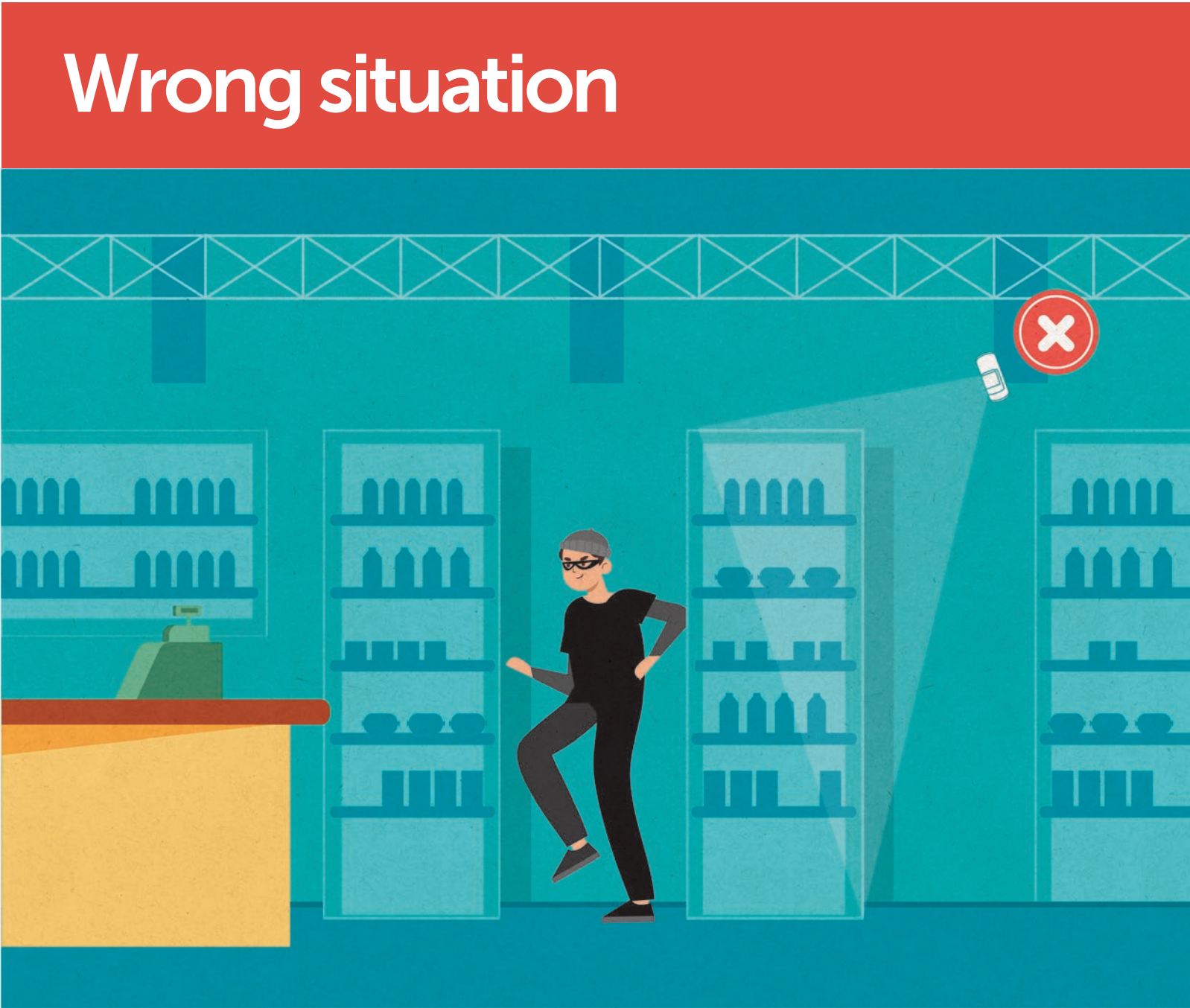
ERROR:
Sensor suitable for corner walls installed in hallways.

OCCURRENCE:
Detection only takes place close to the sensor. The coverage area is limited.



SOLUTION:
Use sensors with a narrow detection range, recommended in this case for hallways.

REASON:
Corner wall mounted infrared sensors effectively detect when intrusion occurs foccurs laterally. When performing a frontal intrusion, detection will only be performed close to the sensor.



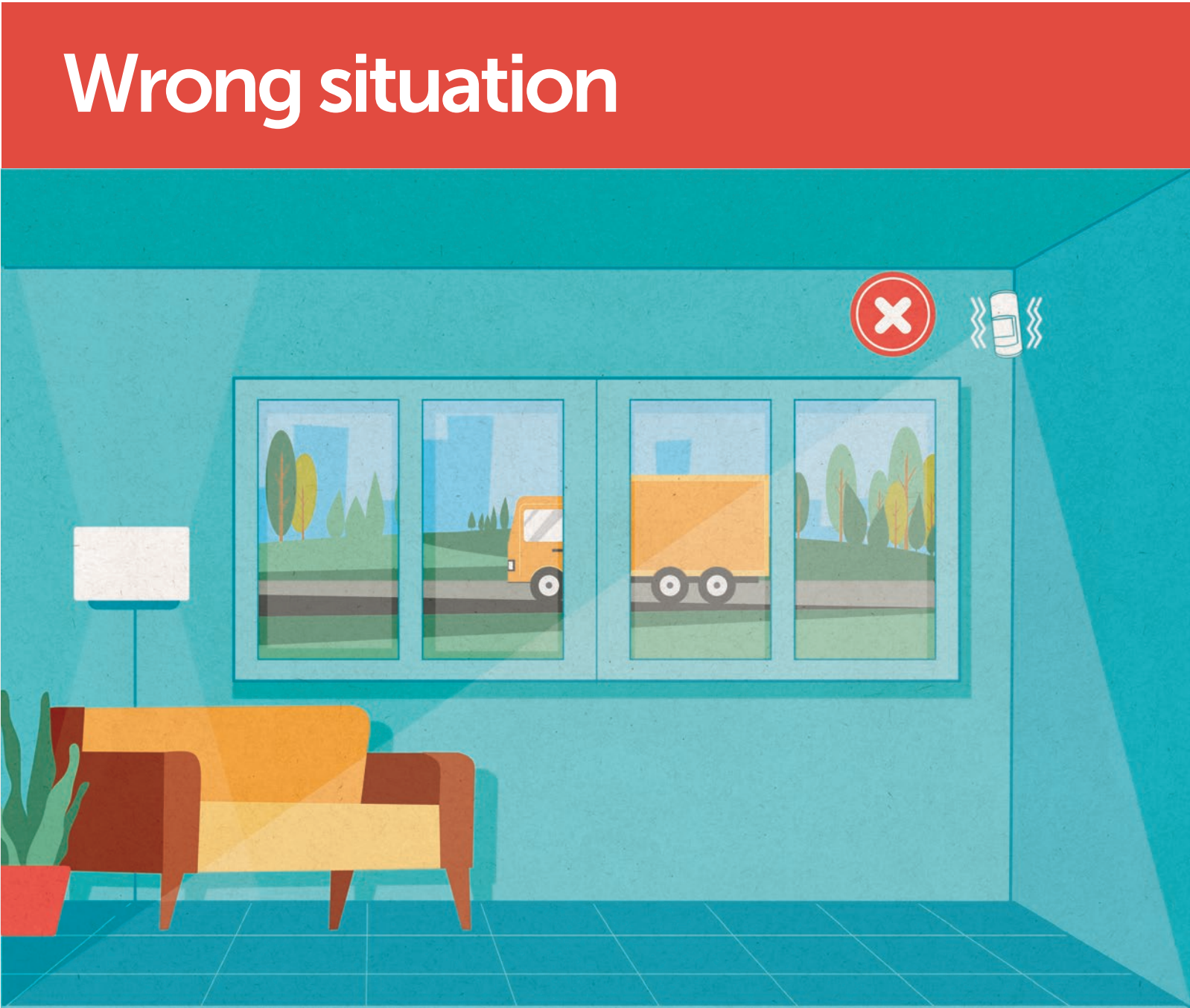
ERROR:
Detection area limited by shelves or gondolas.

OCCURRENCE:
The environment is not completely covered, requiring many sensors for protection.



SOLUTION:
Use ceiling sensor with 360° detection.

REASON:
The ceiling sensor views the environment from top to bottom, so a greater number of corridors will be protected with just one sensor.



ERROR:
Vibrations in the sensor detection area generated by external sources such as heavy vehicles, machinery, air displacement in curtains, doors and vegetation.

OCCURRENCE:
Accidental alarm on sensors with infrared technology or by mass displacement - microwave.



SOLUTION:
Use sensors in doors and windows with magnetic detection in violation/opening.

REASON:
Vibrations can alter the stabilization of the infrared sensor or be identified by microwaves as mass variation.



ERROR:
Motion sensors monitoring areas where objects can move with wind.

OCCURRENCE:
Accidental sensor alarm generated by objects, not people.



SOLUTION:
Use barrier sensors at a point not obstructed by objects.

REASON:
Motion sensors identify the movement of clothes on the clothesline and other objects with thermal variation different from the environment. The barrier sensor, on the other hand, identifies the obstruction of the monitored area.



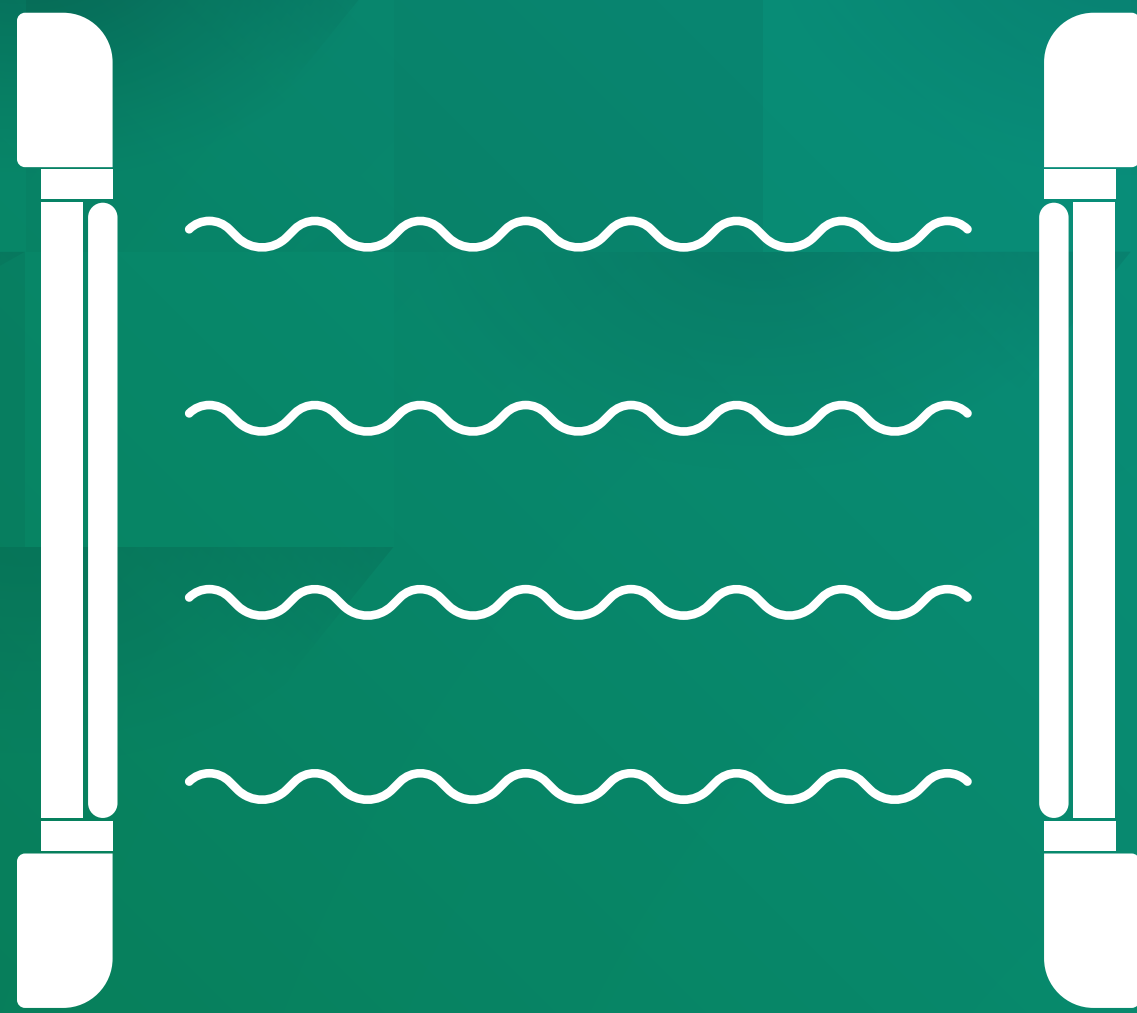
ERROR:
Infrared sensor installed in an environment with high temperature and low thermal variation.

OCCURRENCE:
Extremely "slow" sensor and detection in rare moments.

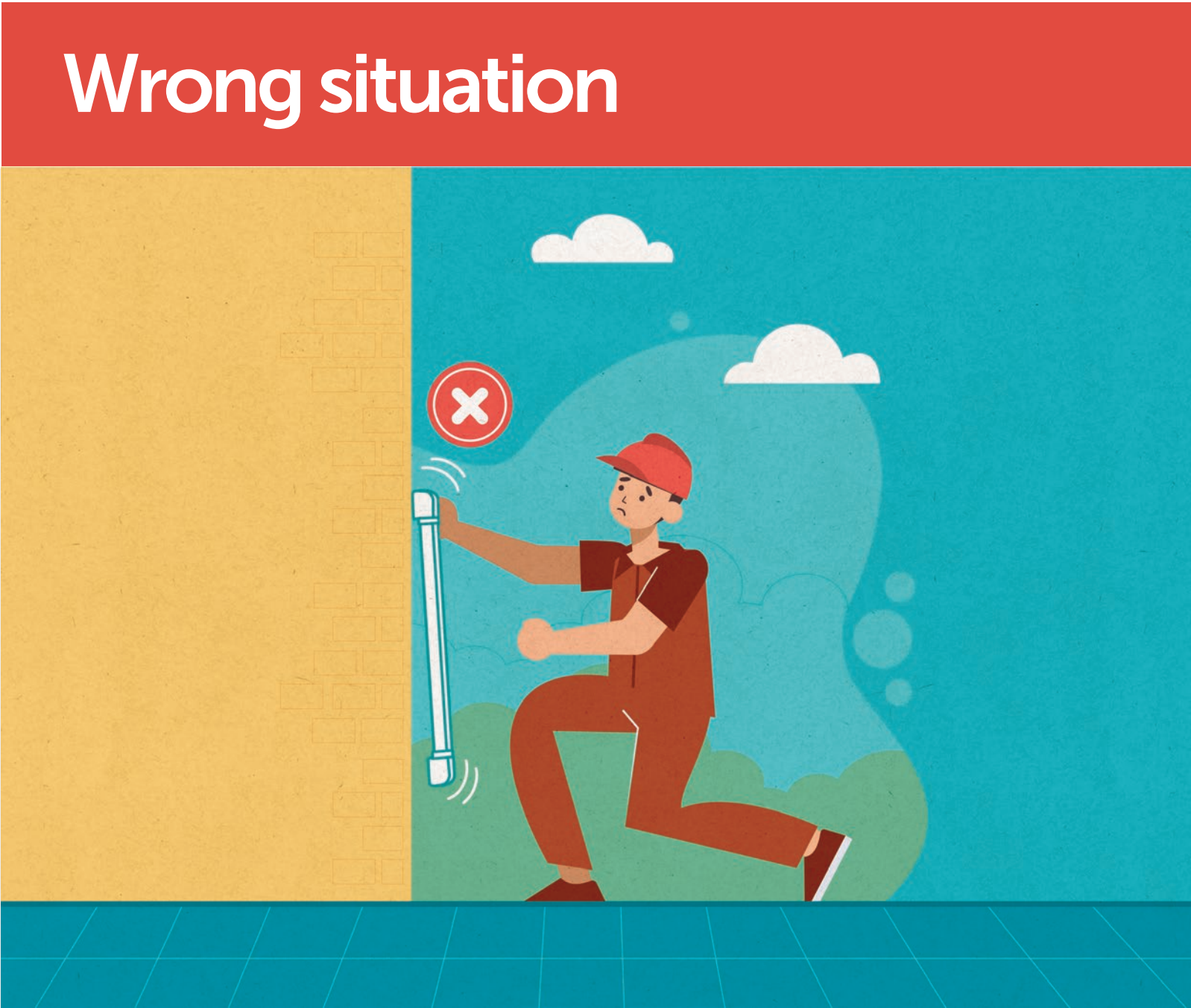


SOLUTION:
Use sensors with microwave technology.

REASON:
Infrared detects heat variation. Therefore, in an environment with little variation (environment x body), detection will be impaired, while the microwave detects mass variation regardless of local temperature.



Barrier sensor



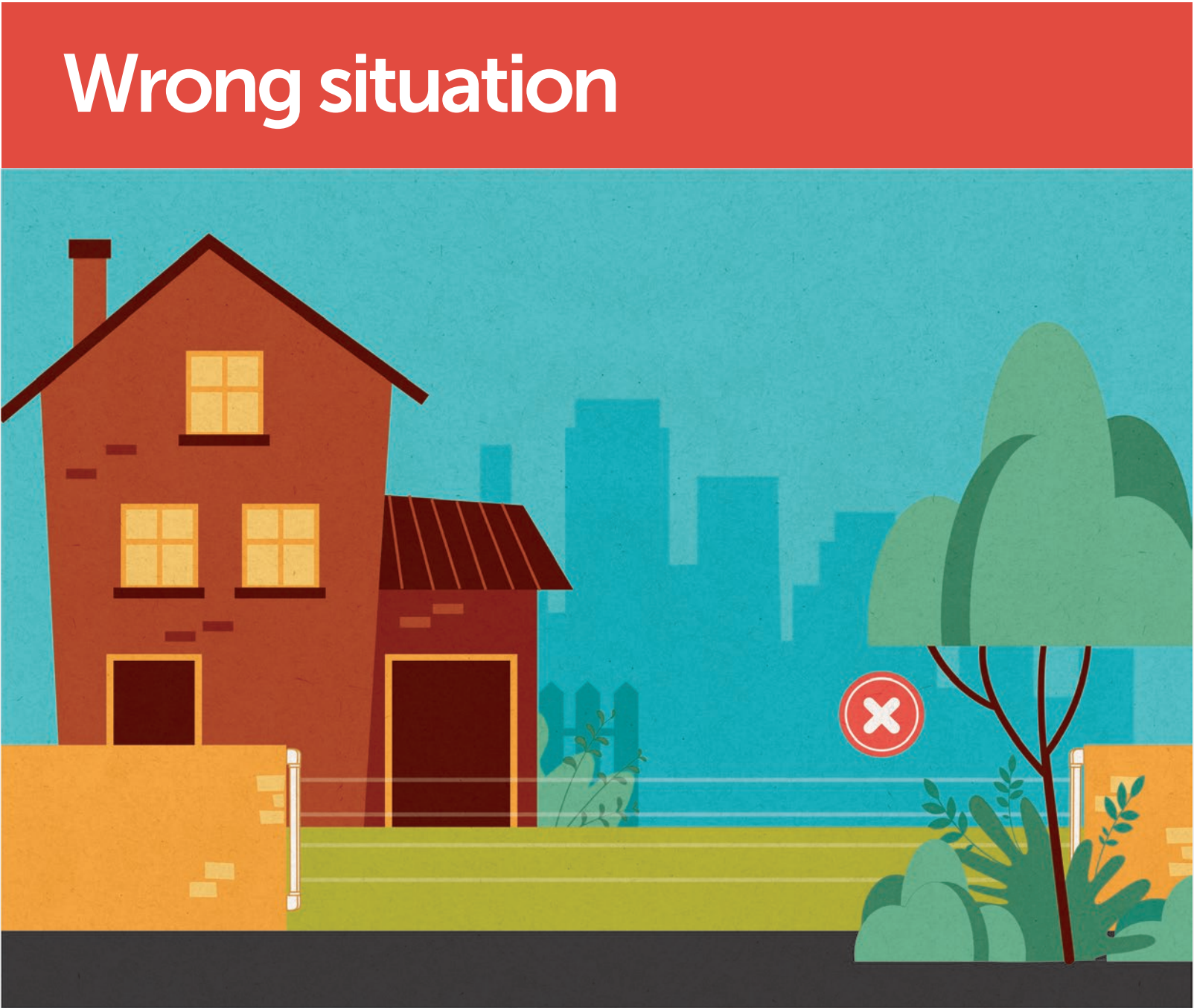
ERROR:
Badly attached barrier sensor.

OCCURRENCE:
Accidental sensor alarm caused by winds/vibrations.



SOLUTION:
Fix the sensor correctly and preferably use supports (fixed or articulated).

REASON:
Barrier protection requires precise alignment between transmitter and receiver. If the alignment is changed, the alarm will occur even without violation/intrusion. The correct fixation of the sensors is essential for correct functioning.



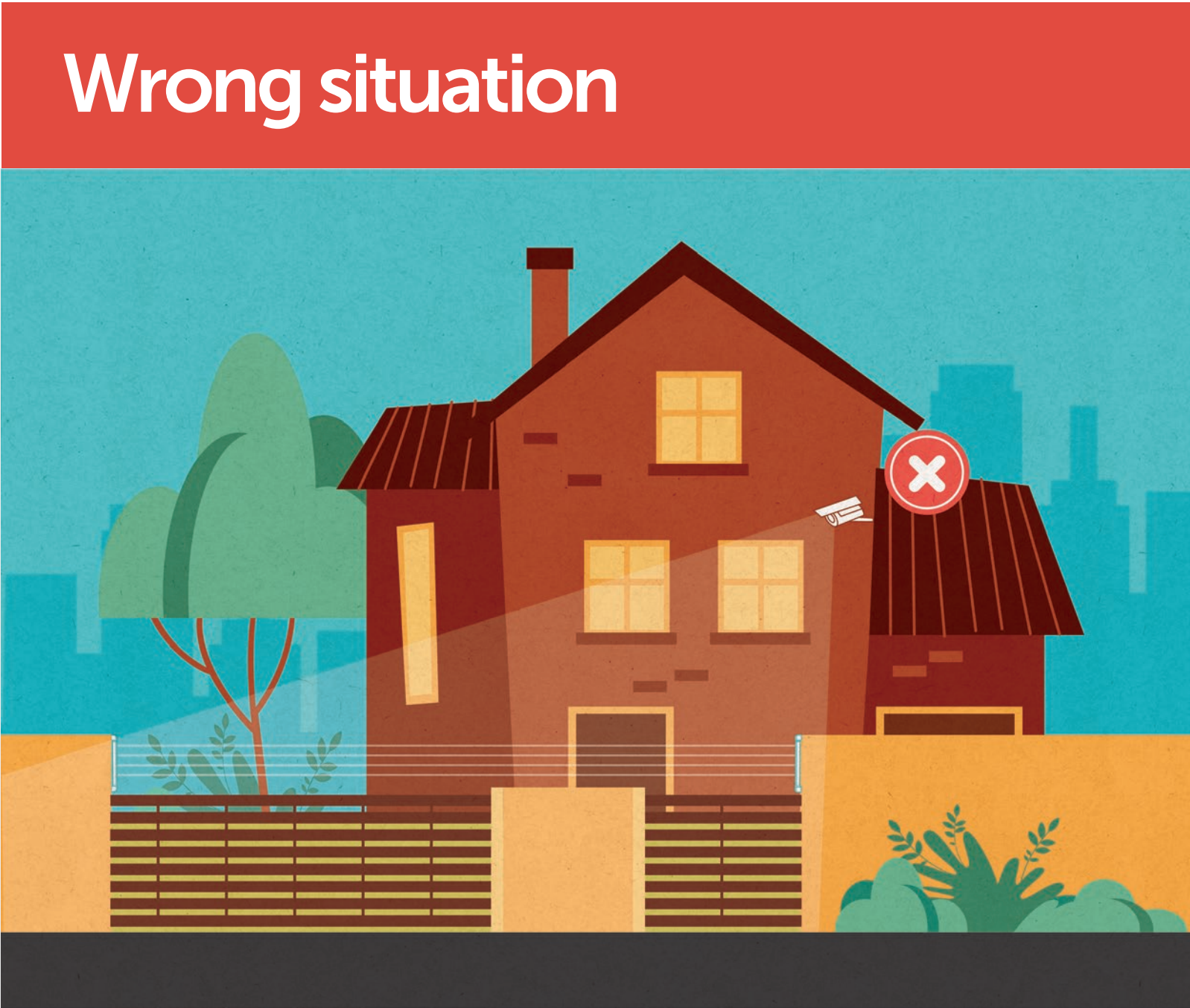
ERROR:
Blocking of barrier beams by shrubs and vegetation.

OCCURRENCE:
Accidental sensor alarm caused by beam blockages.



SOLUTION:
Remove vegetation that causes signal obstruction between transmitter and receiver or reposition sensors.

REASON:
Barrier sensors identify the intrusion by blocking the signal generated between the pairs. This blocking can be done by any physical object.



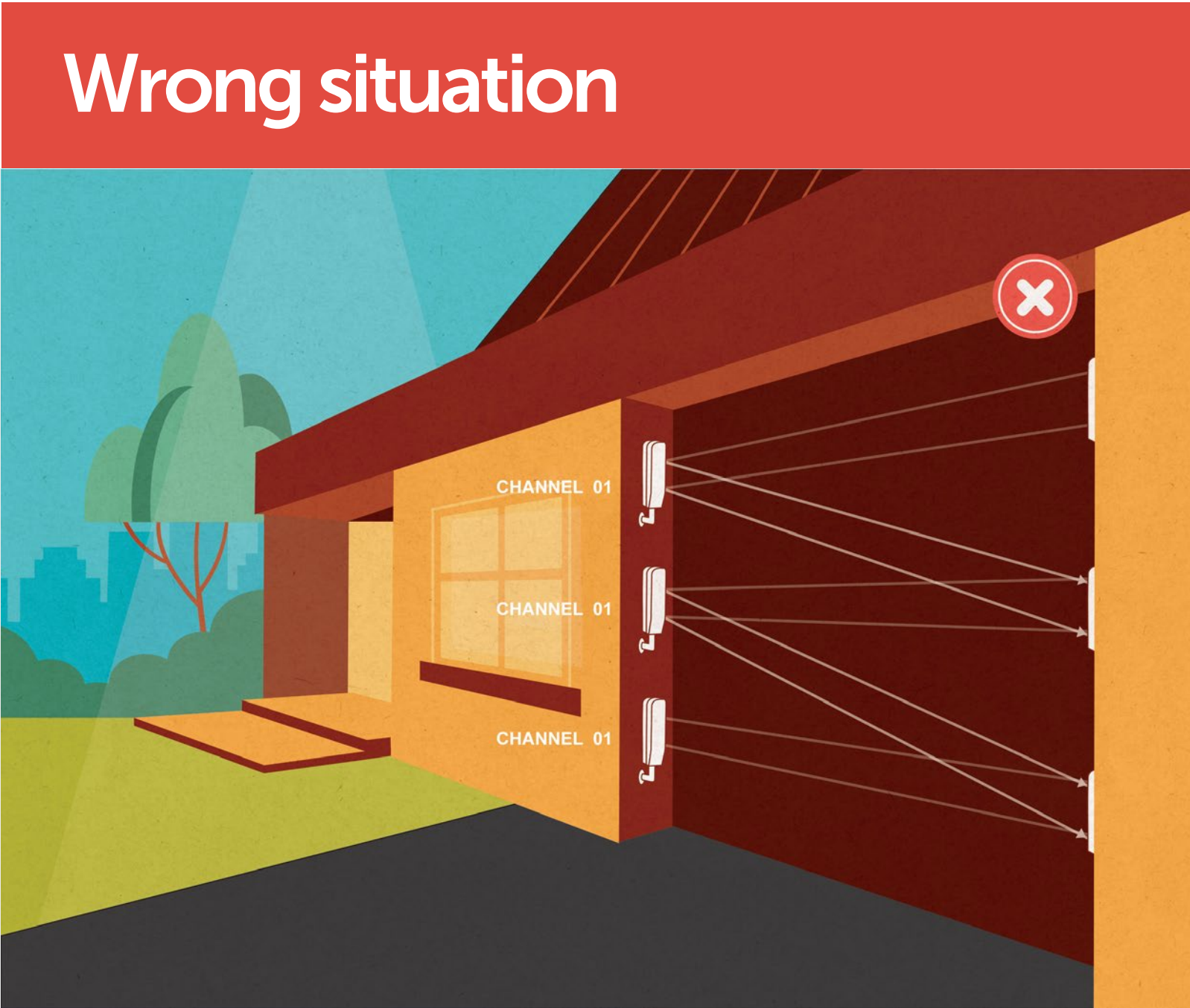
ERROR:
IR cameras installed in front of the barrier sensor.

OCCURRENCE:
Accidental sensor alarm generated by the camera's infrared activated in night mode.



SOLUTION:
Install the camera so that its infrared does not fall directly on the barrier sensors.

REASON:
Barrier sensors work with infrared technology. When another infrared is emitted directly on the sensors, there is interference between the signals and, consequently, the trigger to alert the monitoring.



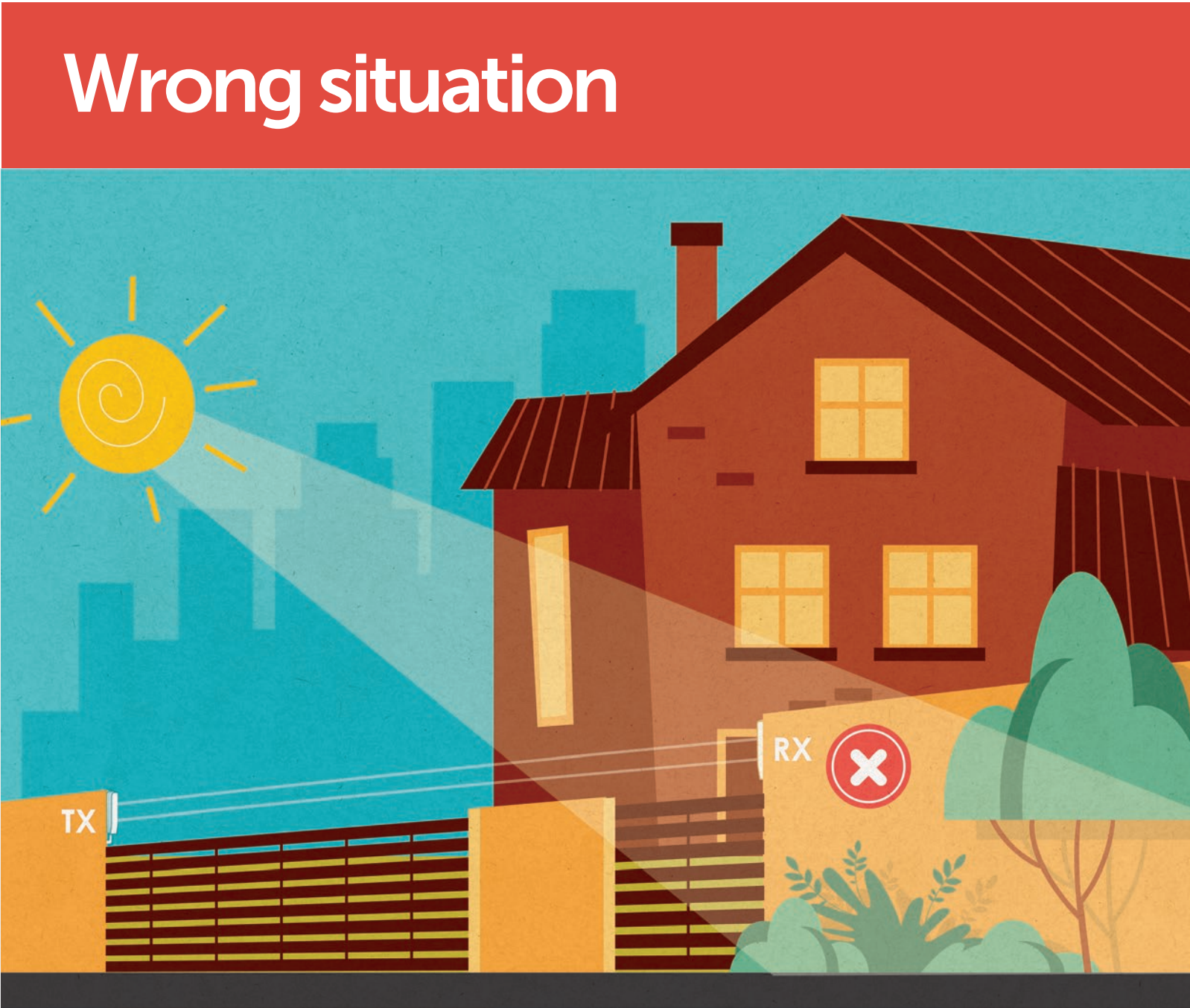
ERROR:
Interference between different pairs of barriers.

OCCURRENCE:
Accidental alarm or even constant alignment even when the signal is obstructed.



SOLUTION:
Configure barrier sensor pairs on separate channels.

REASON:
Each channel available in the sensor configuration adjusts the infrared signal at a different frequency. At different frequencies, the signal of one pair does not interfere with that of another pair.



ERROR:
Incidence of sunlight directly on the receiver (at dawn or dusk).

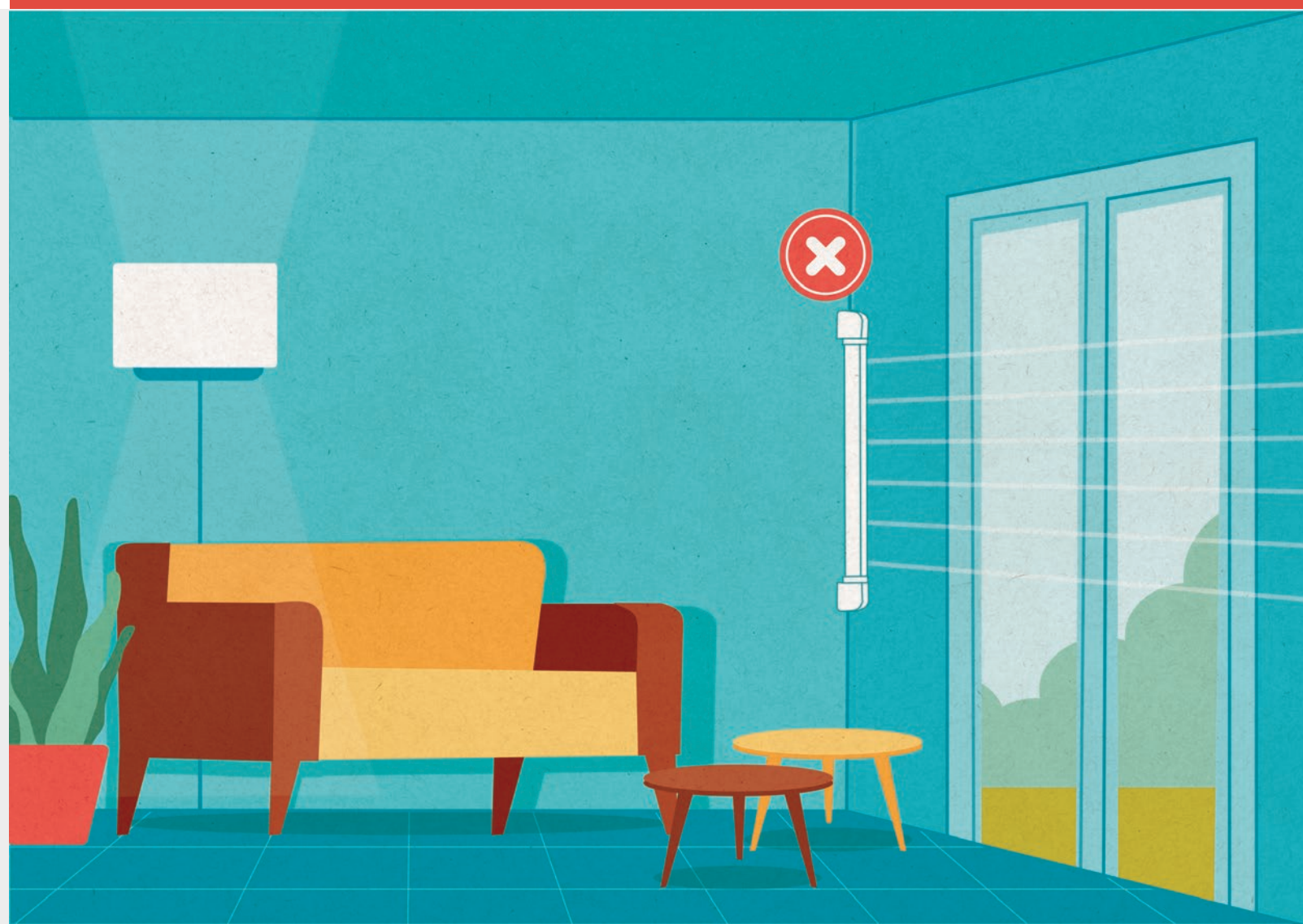
OCCURRENCE:
Accidental sensor alarm generated by interference of sunlight in infrared beams.



SOLUTION:
Reverse positioning between receiver and transmitter.

REASON:
Like other infrared signals, the sun's beam emits waves that interfere with the reception of the beam between the barriers. Therefore, it will be necessary to eliminate the frontal incidence of sunlight on the receiving barrier.

Wrong situation



ERROR:

Long-range barrier sensor installed indoors and short-range.

OCCURRENCE:

The sensor does not trigger when the intrusion occurs with blocking of the beams.

Right situation



SOLUTION:

Changing the sensor configuration by reducing the infrared signal strength or using another type of detection technology to protect the environment.

REASON:

Barrier sensors installed at short distances and indoors can have their signal reflected on walls/glass. Thus, even if it is obstructed, the signal will always be present at the receiver by reflections.



Opening sensor



ERROR:
Small GAP opening sensor installed in doors/windows with opening to the jamb.

OCCURRENCE:
The sensor does not close, and the zone is always open or the alarm occurs in case of slight vibrations.



SOLUTION:
Use sensors with greater GAP, such as 50 mm.

REASON:
Opening sensors identify closure through the proximity of the magnet to the sensor. If the GAP between the door and the jamb is large, it will be necessary to use a sensor that has a greater opening/closing GAP.

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